

REMARKS

Status of the Application

Claims 1-8 and 10-17 are pending in the application. Claim 7 is objected to because of informalities. Claims 1-6 and 14-17 are rejected under 35 U.S.C. § 102(b) as being anticipated by Hanaoka et al. (US Publication 2002/0030245). Claims 7, 8, and 10-13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hanaoka in view of Wood et al. (US Publication 2004/0207081).

By this Amendment, Applicants hereby amend claims 1, 4-7, 10, 12 and 13.

Preliminary Matters

Applicants thank the Examiner for accepting the drawings filed on October 16, 2009.

Claim Objection

Claim 7 is objected to because of informalities.

Without conceding to the Examiner's objection, Applicants hereby amend claim 7 in order to address any alleged deficiencies.

Comparison Between the Subject Invention as Claimed and the Cited References

Claims 1-6 and 14-17 are rejected under 35 U.S.C. § 102(b) as being anticipated by Hanaoka et al. (US Publication 2002/0030245).

The Examiner has provided the same basic rejection (with some minor changes) of claims 1 and 7 in the instant Office Action as were provided in the previous Office Action dated August 7, 2009. Therefore, the following comments will be based mainly on the Examiner's Response to Arguments found on pages 14 and 15 of the instant Office Action.

With regard to claim 1, the Examiner argues that conductive layer 8 allegedly partially fills hole 4, and interpreted broadly, a partially filled hole satisfies the claim limitations of claim 1.

Without conceding to the merits of the Examiner's rejection, and in the interest of compact prosecution, Applicants hereby amend claim 1 to recite "a through extension wiring with which said through hole is completely filled and which is formed on one surface of said through wiring board." The Examiner argues that the conductive layer 8 in Hanaoka corresponds to the extension wiring recited in claim 1. However, since the conductive layer 8 does not completely fill the hole 4, the conductive layer 8 cannot correspond to the extension wiring recited in claim 1. Therefore, Hanaoka cannot anticipate claim 1.

Accordingly, Applicants respectfully submit that claim 1 is patentable over the applied art. In the interest of compact prosecution, and without conceding to the Examiner's rejections, claims 4-6 are also hereby amended in similar manner to claim 1. Accordingly, claims 4-6 are patentable for reasons analogous to claim 1. Claims 2, 3 and 14-17 are patentable at least by virtue of their respective dependencies.

Claims 7, 8, and 10-13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hanaoka in view of Wood et al. (US Publication 2004/0207081).

Without conceding to the merits of the Examiner's rejection, and in the interest of compact prosecution, Applicants hereby amend claim 7 to recite "a through wiring formed in said through hole which completely fills said through hole."

With regard to claim 7, the Examiner argues that the proposed combination of Hanaoka and Wood renders claim 7 obvious because Hanaoka allegedly discloses reroute wirings disposed on opposite surfaces of board 6 (see FIGS. 13 and 14 of Hanaoka), and the "connection

to a single exposed wiring” disclosed in Wood may be applied to *both* surfaces of Hanaoka. Thus, the Examiner concludes that the proposed combination of Hanaoka and Wood allegedly renders claim 7 obvious.

Applicants respectfully submit that the Examiner has misconstrued the applicable standards or determining obviousness, as well as the applied references, by combining the Hanaoka and Wood references because these references provide contradictory teachings. MPEP 2141.03(VI) states “[a] prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984)”. Further, MPEP 2143.02(VI) states “[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)”. These sections of the MPEP clearly prohibit an Examiner from selectively combining features from different references, while ignoring other teachings that teach away from the asserted combination, in order to map the features claimed onto the references.

With regard to the combination of Hanaoka and Wood, Hanaoka discloses that a hole 4 is maintained (i.e., not filled) in semiconductor device 6 in order to avoid the generation of voids and an unreliable electrical connection. See paragraph [0177]. Thus, as noted by the Examiner on page 6 of the instant Office Action, Hanaoka fails to disclose that a first reroute wiring “comes in contact with a first exposed wiring portion.” Wood, on the other hand, discloses forming conductive members 38, which are disposed in openings 28. These conductive members 38 are solid. Conductors 40 then connect contacts 50/52 to conductive member 38.

However, because the connection disclosed in Wood is predicated on a solid conductive member disposed in opening 28, one of ordinary skill in the art would be discouraged from combining these teachings, as Hanaoka clearly indicates that a solidly filled hole results in undesirable results (i.e., changing the principle of operation).

Accordingly, Applicants respectfully submit that amended claim 7 is patentable over the Examiner's proposed combination of references. In the interest of compact prosecution, and without conceding to the Examiner's rejections, claims 10, 12 and 13 are also amended to recite elements similar to claim 7, and are patentable for reasons analogous thereto. Claim 8 is patentable at least by virtue of its dependency from claim 7.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

/Dion R. Ferguson/

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

Dion R. Ferguson
Registration No. 59,561

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: May 27, 2010